Extron® Electronics
INTERFACING, SWITCHING AND DISTRIBUTION

User's Guide

SI 26 and SI 28

Surface Mount Speakers

68-1164-01
Rev. A
11 06

Packaging Information

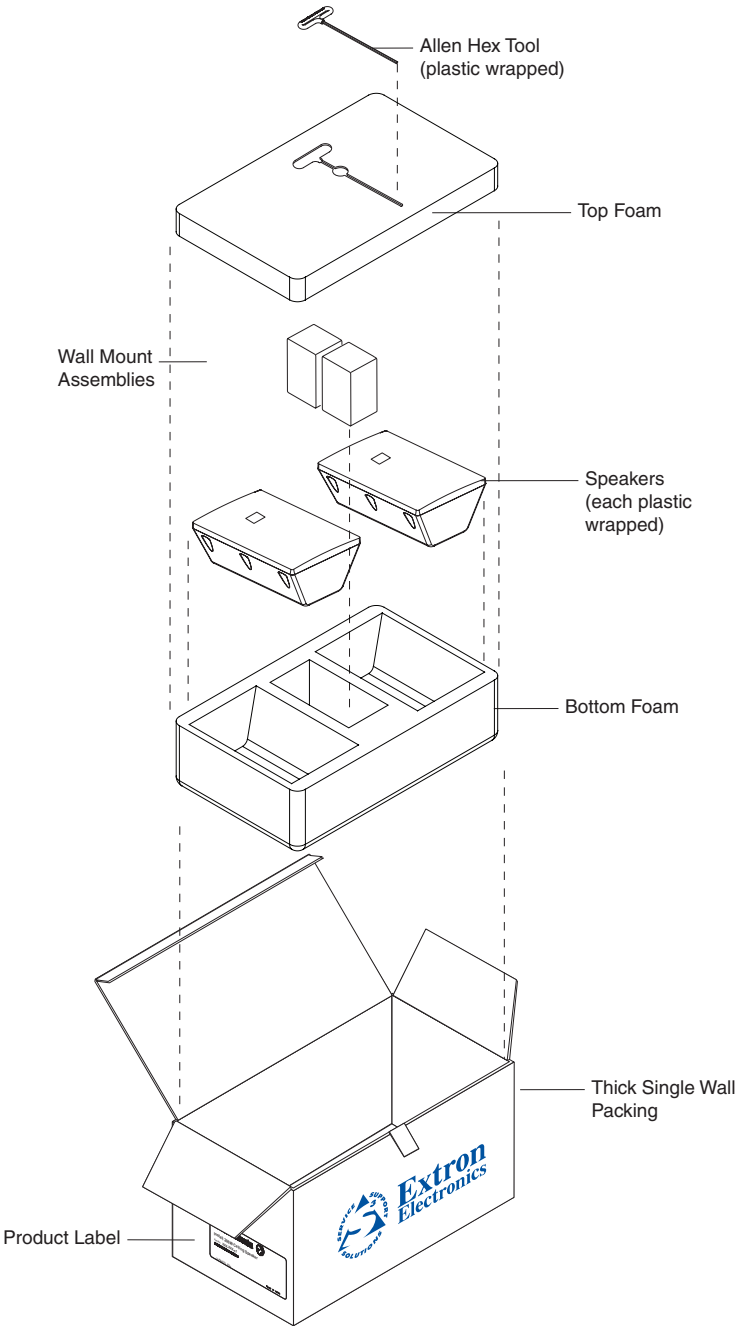


Figure 1 — SI 26 and SI 28 speaker packaging details

About the SI 26 and SI 28 Speakers

The Extron *System INTEGRATOR®* SI 26 and SI 28 two-way surface mount speakers are ideally suited for classrooms, conference rooms, and boardrooms. With a weather resistant construction, they are also suitable for outdoor environments.

- SI 26 features a 6.5" long-throw woofer, 1" tweeter, 150 watts continuous program capacity, and frequency response from 70 Hz to 20 kHz.
- SI 28 features an 8" long-throw woofer, 1" tweeter, 180 watts continuous program capacity, and frequency response from 50 Hz to 20 kHz.

Figure 2 — Extron SI surface speakers

NOTE *Referring to packaging information for location, carefully remove and check contents before installation.*

NOTE *Extron recommends that the wiring installation is performed by a professional audio equipment installer.*

CAUTION *Use cable clamps to hold the cables in place for strain relief. Trim back/insulate exposed cable shields with heat shrink to reduce the chance of short circuits.*

NOTE *For Troubleshooting Tips see pages 10 and 11.*

NOTE *For Service Access see page 10.*

Features

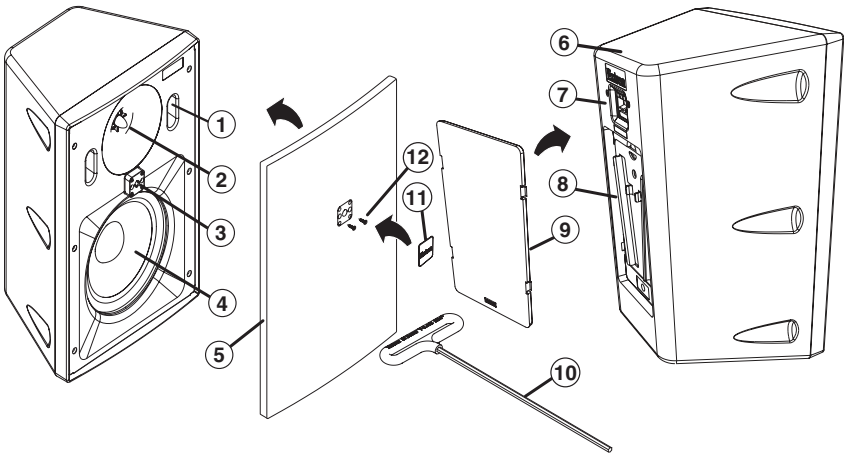


Figure 3 — Speaker Features

Dimensions: **SI 26**: 13.0" H x 8.5" W x 6.75" D
(33.0 cm H x 21.6 cm W x 17.1 cm D)
SI 28: 16.5" H x 11.5" W x 8.6" D
(41.9 cm H x 29.2 cm W x 21.9 cm D)

1. Dual tuned bass reflex ports
2. 1" ferrofluid-cooled, aluminum dome tweeter
3. Front locking access (allows for speaker position adjustment)
4. 6.5" (SI 26) or 8" (SI 28) long-throw woofer
5. Grill and enclosure may be painted to match environment
6. Weather resistant construction
7. Push down spring terminals
8. Wall mount assembly with unique V-Lock™ (Patent Pending) system included
9. Back cover for use when speakers are not wall mounted
10. Allen hex tool
11. Extron logo (fits in grill to cover locking port access)
12. Front grill retaining screws (2)

- 8 ohm nominal impedance
- 75 watts (SI 26) or 90 watts (SI 28) continuous pink noise
- 150 watts (SI 26) or 180 watts (SI 28) continuous program
- Internal driver overload protection circuit

Installing the SI 26 or SI 28 Speaker

The SI 26 or SI 28 can be mounted on a surface, such as a wall or post, or mounted in a bookcase, or under a shelf, and can be used with any Extron product with power amps.

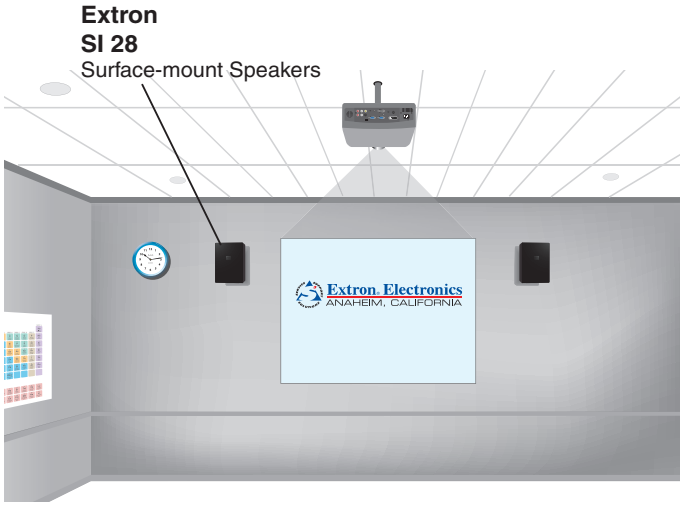


Figure 4 — Surface speaker application

Desk top or bookshelf applications

1. For quick installation on a desk top or bookshelf, simply place on a desk, shelf or other flat surfaces as desired.
2. Route the speaker wire (Extron recommends using 12-18 AWG) to the speakers.
3. Strip the wire and connect the speakers as described in "Wiring the SI 26 and 28 speakers" on page 8.

Wall mounting applications

Installing the wall mount assembly

NOTE *Before starting installation ensure that the wall and wall material is capable of supporting the combined weight of the speakers and the wall mount assemblies.*

1. If mounting to drywall, use a stud locator to locate the studs in the wall. Mark their position.
2. Remove the wall mount assembly from the box and loosen the hex cap screw (turning it counter clockwise) with the allen hex tool supplied. Rotate the front section approximately 90 degrees to the rear mounting plate, as

shown in figure 5 and tighten the hex cap screw to lock the plate in position. This makes the next steps easier to perform.

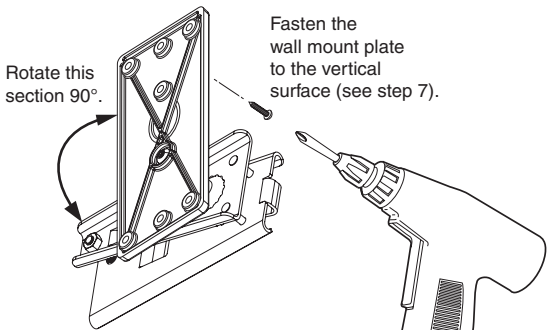


Figure 5 — Rotate and mount the wall mount assembly

3. Mark the location of the wall mount plate's three primary mounting holes on the stud line, and drill pilot holes.

NOTE *For some surfaces the four alternative pilot dimples (see figure 6) may be used to secure the assembly in place. Mark and drill as appropriate.*

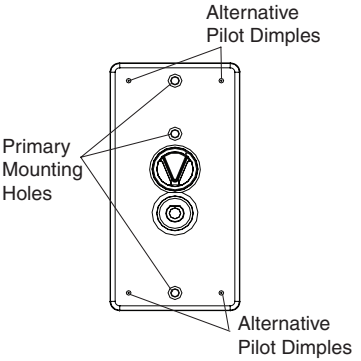


Figure 6 — Mounting hole locations on the speaker bracket

4. Mark the wall where the wire will pass through the plate, and cut a small access hole large enough for the wire to pass through without snagging. If the stud is wider than the plates access hole, then cut the hole in the wall to the left or right and directly alongside the stud (see figure 7).

NOTE *Before cutting it, make sure the plate will hide the proposed area of the hole after installation.*

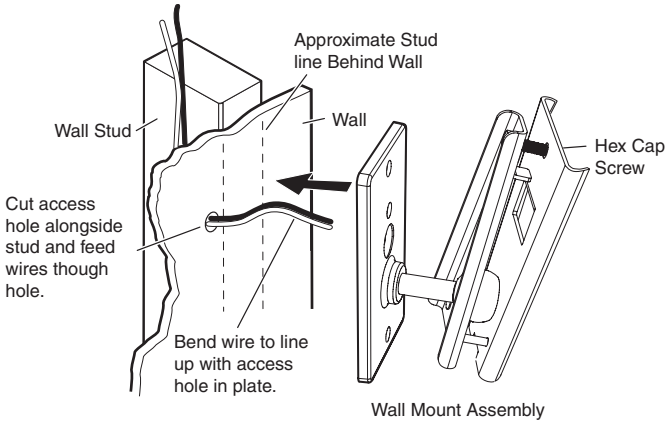


Figure 7 — Install wall mount assembly

NOTE *Extron recommends that the wiring installation be performed by a professional audio equipment installer.*

5. Using compatible speaker wire (Extron recommends using 12-18 AWG), route the wire from the audio source to the SI speaker location by the most convenient and safe route. If the wiring is to remain hidden behind the wall, follow the stud to where the small access hole has been cut, and feed about two feet of wire out through the hole into the room. If necessary, bend the wire to align with the plate (see figure 7). Secure the wire to the stud at various places, but allow enough freedom of movement near to the hole for connection to the speaker.

6. Pull sufficient wire up through the holes in the rear plate (see figure 8) to allow ease of connection to the speaker after installation.

NOTE *Do not strip and connect the wire at this time.*

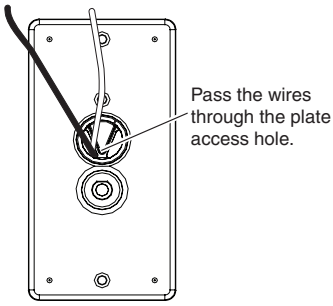


Figure 8 — Pass the wire through the plate

7. Place the wall mount assembly against the wall, aligning the plate holes with those drilled, and secure with appropriate hardware (see figure 5), using a powered screwdriver with an appropriate screw bit.

8. When the assembly is securely in place, loosen the hex cap screw (turn counter-clockwise) and rotate the front section back into a vertical position with the hex cap screw at the top. Using the allen hex tool, turn the hex cap screw clockwise to tighten.

9. Repeat steps **1** through **8** for the second assembly mount.

Preparing the speaker for mounting

1. Remove the cover from the back of a speaker by pulling the two attached tape tabs towards you and lifting the cover away.

NOTE *If the tape has been removed previously, carefully insert a flat bladed screwdriver to loosen the two lower locking tabs first, then one or more of the top tabs. Take care not to crack or chip the cover, or break off the locking tabs. Lift away the cover as it comes free.*

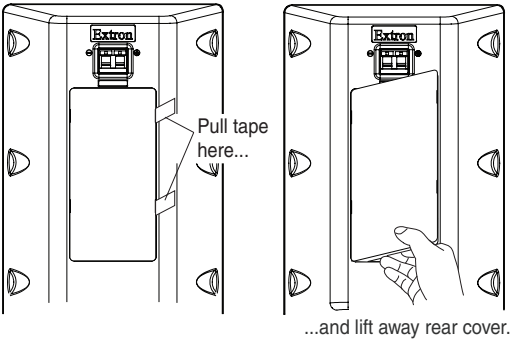


Figure 9 — Pull tape and lift away the rear cover

2. At this point connect an optional seismic safety cable (not supplied) to the rear of the speaker by looping it through the hole on the box bracket and securing (see figure 10). Anchor the other end to a suitable secure point above the speaker wall assembly mount.

CAUTION *The safety cable should be of sufficient strength to support the full weight of the speaker and wall mount assembly combined.*

NOTE *Ensure that the cable is long enough to allow you to connect the speaker wires and to manipulate the speaker into position on the assembly mount.*

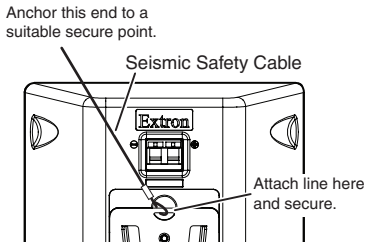


Figure 10 — Attach a seismic safety cable to the rear of the speaker

Mounting the SI 26 speaker onto the wall mount assembly

3. Carefully lift the speaker above the wall mount assembly and gently slide the speaker box bracket down into the V lock groove (see figure 11) until it locks into place.

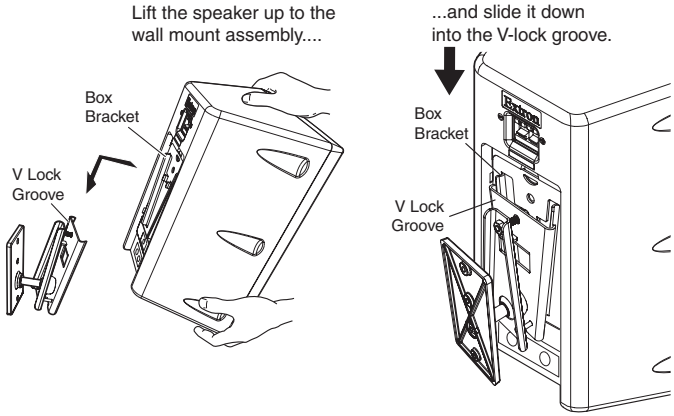


Figure 11 — Slide the speaker down onto the wall mount assembly

4. Repeat steps **1** through **3** for the second speaker, then proceed to "Wiring the SI 26 and 28 speakers" section on page 8.

Mounting the SI 28 speaker onto the wall mount assembly

3a. Carefully lift the speaker up **as close to the bottom of the wall mount assembly as possible** and hook the right outer edge of the speaker box bracket over the right inner edge of the V-lock groove (see figure 12).

NOTE *Holding the speaker so that the lowest part of the speaker is as close to the bottom of the V-lock groove as possible makes it easier to hook the two parts together.*

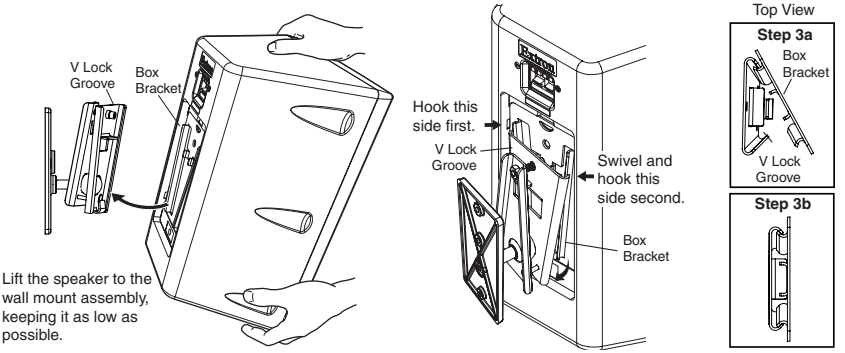


Figure 12 — Hook the speaker over the edges of the V-lock groove on the wall mount assembly

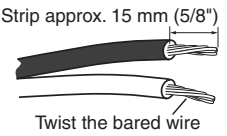
3b. Rotate the speaker until the speaker box bracket left edge hooks over the left edge of the V-lock groove (see above).

3c. When the bracket is securely over the V-lock groove, gently slide the speaker down until it locks into place.

4. Repeat steps **3a** to **3c** for the second SI 28 speaker.

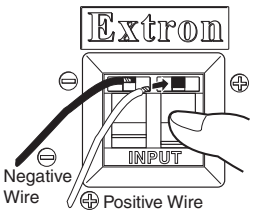
Wiring the SI 26 and 28 speakers

1. When both speakers are in place, carefully pull enough speaker wire to reach up to the terminals at the back of the each speaker and strip the ends of the wire approximately 5/8"(15 mm). Twist the bared strands so that they hold firmly in the connector.



2. Press down on the spring loaded terminals to open the holes at the top. Observing the correct polarity, (⊕ wire to ⊕ terminal and ⊖ wire to ⊖ terminal) insert the twisted wires into the relevant open holes (see figure 13) and release the springs to secure. Push any loose wire through the wall mount assembly and back into the wall.

CAUTION *Do not connect the speaker terminals to one channel in parallel (together) with those of the other channel.*



Push down on the spring terminals at the back of the speaker, and insert the wires. Release the springs to secure.

Figure 13 — Insert wiring into the terminals

3. Turn on the audio source and any associated devices. Follow the manufacturers instructions to adjust the source and device settings as desired to get the optimum audio output for your speaker application. It may be necessary to adjust the angle of the speaker (see steps **5** and **6** below) to get the best audio coverage area for your application.

4. To adjust the angle of the speaker, carefully remove the Extron logo on the front of the speaker to expose the front locking access (see figure 3, item ③, for location). To do this, carefully pry the logo away with your fingers or use a small flat head screwdriver (see figure 14), taking care not to damage the front grill or the logo.

Figure 14 — Remove the logo from the front grill

5. Insert the allen hex tool into the locking access, and slightly loosen the hex cap screw. Adjust the speaker to the desired angle (see figure 15), and torque the hex cap screw down clockwise until snug, about 6 to 8 turns. The speaker will sit securely in the desired position.

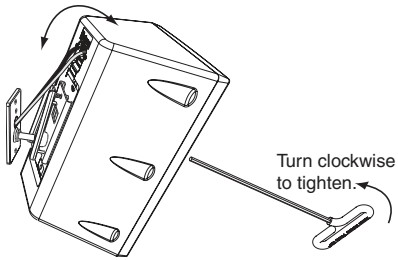


Figure 15 — Adjust speaker and lock in place

NOTE *Check that the speaker is secure and cannot be lifted from the wall mount assembly after locking it into place. If it does lift out, continue tightening down the hex cap screw until it is no longer possible to lift the speaker from the wall mount assembly.*

6. Replace the Extron logo, pressing it firmly into place.

NOTE *The Extron logo can be fitted either horizontally or vertically.*

Service access

In order to service the speaker it may be necessary to remove the front grill.

To remove the grill:

1. Carefully remove the Extron logo, as described on page 9.
2. Remove the two small screws from the front grill (see figure 16 for location).

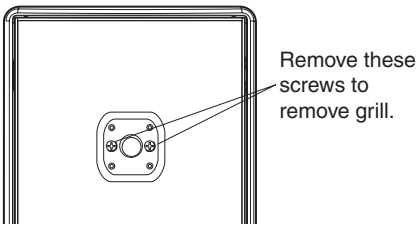


Figure 16 — Grill retaining screws are located under Extron logo (shown with logo removed)

3. Using a paper clip or similar wire, hook the grill and carefully pull it away, taking care not to damage it.

To refit the grill:

1. Carefully press the grill back into place.
2. Insert and tighten down the screws.
3. Replace the logo.

Troubleshooting Tips

If you have problems with your speaker, refer to the table on page 11 for the possible problem, cause, and remedial action. If you do not see your problem listed, or if the remedial action suggested does not cure the problem, consult your local Extron dealer or the Extron Technical Support line (see Warranty).

The following are tips to help you in troubleshooting.

- Some symptoms may resemble others, so you may want to look through all of the examples before attempting to solve the problem.
- Be prepared to backtrack in case the action taken doesn't solve the problem.
- It may help to keep notes and sketches in case the troubleshooting process gets lengthy. This will also give you something to discuss if you call for technical support.
- Try simplifying the system by eliminating components that may have introduced the problem or made it more complicated.

	Observed Problem	Possible Cause(s)	Remedial Action
1	Speaker easily lifted from mount assembly.	Locking hex cap screw not tightened enough.	Following the steps on page 9, tighten the hex cap screw until it is not possible to remove the speaker.
2	No sound heard from speakers.	Speaker cables not connected or damaged. Output device (e.g., amplifier)	Reconnect or replace speaker cable. Check cable routing. Check that the output devices are plugged in and powered on. Check that all cables are connected correctly. Check that an output signal is present. If present, change cables and/or use a known working set of speakers. Check that volume settings are adequately high. Replace suspect devices with known working devices. Retry the system.
3	Output poor or intermittent.	Damaged cables or faulty connection.	Check cables and connections. Reconnect or replace if needed.
4	Constant buzzing, hissing, or humming.	Faulty device(s) within sound system. System grounding inadequate or suspect.	Check all devices. Swap out and test with known working devices to isolate interference source. Replace faulty device(s). Check grounding to devices and repair where needed.
5	Poor low frequency output.	Incorrect speaker polarity connection between multiple speakers.	Check polarity between speakers. Incorrect polarity (out of polarity) results in low frequencies cancelling each other out. Reverse polarity for each speaker in turn until a greater lower frequency is obtained.

Specifications

Audio/acoustic and electrical

Speaker type	2-way, indoor/outdoor surface mount
Frequency range	SI 26 70 Hz to 20 kHz, -10 dB, half space SI 28 50 Hz to 20 kHz, -10 dB, half space
Power capacity	SI 26 150 W continuous program 75 W continuous pink noise SI 28 180 W continuous program 90 W continuous pink noise
Nominal sensitivity	90 dB SPL, 1W, 1m, half space
Nominal impedance	8 ohms
Crossover frequency	SI 26 2.3 kHz SI 28 2.1 kHz
Woofer	SI 26 6.5" (165 mm) polypropylene cone SI 28 8.0" (203 mm) polypropylene cone
Tweeter	1.0" (25 mm) aluminum dome
Overload protection	Full range power limiter, protecting the tweeter, woofer, and crossover
Input connector	2 pin spring terminals

General

Package	2 speakers (1 pair)
Temperature/humidity	Storage: -40 to +158 °F (-40 to +70° C) / 10% to 90%, noncondensing Operating: +32 to +122 °F (0 to +50° C) / 10% to 90%, noncondensing
Mounting	Wall mount assembly with V-lock (patent pending)

NOTE *Wall mount assembly can be angled up to 20° upward, 35° downward, 30° to the left, and 30° to the right.*

Enclosure type	Plastic, trapezoidal, with metal grille and bass reflex ports
Enclosure outer dimensions	SI 26 13.0" H x 8.5" W x 6.75" D (33.0 cm H x 21.6 cm W x 17.1 cm D) SI 28 16.5" H x 11.5" W x 8.6" D (41.9 cm H x 29.2 cm W x 21.9 cm D)
Product weight	SI 26 11 lbs (5 kg) each SI 28 15 lbs (6.8 kg) each
Shipping weight	SI 26 30 lbs (14 kg) per pair with mounting kit package SI 28 40 lbs (19 kg) per pair with mounting kit package
Warranty	5 years parts and labor

NOTE *All nominal levels are at ±10%.*

NOTE *Specifications are subject to change without notice.*

Extron's Warranty

Extron Electronics warrants this product against defects in materials and workmanship for a period of five years from the date of purchase. In the event of malfunction during the warranty period attributable directly to faulty workmanship and/or materials, Extron Electronics will, at its option, repair or replace said products or components, to whatever extent it shall deem necessary to restore said product to proper operating condition, provided that it is returned within the warranty period, with proof of purchase and description of malfunction to:

USA, Canada, South America, and Central America:
Extron Electronics
1001 East Ball Road
Anaheim, CA 92805, USA

Europe, Africa, and the Middle East:
Extron Electronics, Europe
Beeldschermweg 6C
3821 AH Amersfoort
The Netherlands

Asia:
Extron Electronics, Asia
135 Joo Seng Road, #04-01
PM Industrial Bldg.
Singapore 368363

Japan:
Extron Electronics, Japan
Kyodo Building
16 Ichibancho
Chiyoda-ku, Tokyo 102-0082
Japan

This Limited Warranty does not apply if the fault has been caused by misuse, improper handling care, electrical or mechanical abuse, abnormal operating conditions or non-Extron authorized modification to the product.

If it has been determined that the product is defective, please call Extron and ask for an Applications Engineer at (714) 491-1500 (USA), 31.33.453.4040 (Europe), 65.6383.4400 (Asia), or 81.3.3511.7655 (Japan) to receive an RA# (Return Authorization number). This will begin the repair process as quickly as possible.

Units must be returned insured, with shipping charges prepaid. If not insured, you assume the risk of loss or damage during shipment. Returned units must include the serial number and a description of the problem, as well as the name of the person to contact in case there are any questions.

Extron Electronics makes no further warranties either expressed or implied with respect to the product and its quality, performance, merchantability, or fitness for any particular use. In no event will Extron Electronics be liable for direct, indirect, or consequential damages resulting from any defect in this product even if Extron Electronics has been advised of such damage.

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